



INSIDE

- Frank Coughlan assumes presidency of GSA
- Range team maintains winning tradition
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University reaching across Pacific Ocean to maintain and expand relations

President expects to visit alumni, sister institutions and corporate and government officials

As Edmonton and the province continue to establish economic links with Pacific Rim countries, the University of Alberta continues to strengthen its relations in the region as well.

President Paul Davenport, Vice-President (Development and Community Affairs) John McConnell, and Fu-Shiang Chia (Zoology) will visit Taiwan, South Korea, Hong Kong and Japan in early April. The University wants to strengthen its educational and business partnerships and meet with alumni, government officials and friends of the University.

"We want to strengthen our academic ties with other institutions in those four countries," explains the President. Furthermore, the University wants to build partnerships with companies and individuals in the area that might have an interest in collaborative research and educational activities, and in investing in U of A-produced technology. Alumni meetings have also been scheduled.

"I believe our overall strategy in the area will be to build on our strengths," says the President, "and to develop relations in areas

where we see the U of A as particularly strong, and where we see our partners as particularly strong. We're not going forward in just one or two areas," he says, acknowledging the University's diversity.

"We're dealing with very fine universities and they want to be associated with the best. Remember, they have the option of a great many North American universities, so we believe they'll seek out cooperative relations with the U of A in precisely those areas where we appear to be the best in North America," the President says.

According to Bob Rosen, a member of both the University Board of Governors and the board of Economic Development Edmonton, it is vitally important that the province, city and University of Alberta build coalitions in these countries. He points out that a single trip a year won't accomplish what is needed, and there will come a time when the University will have to visit these countries at least three times annually.

"Strengthening existing business partnerships and developing new ones are important components of our overall external relations programs," Vice-President McConnell says. "Such mutually beneficial partnerships will be the focus of our meetings with Daishowa Paper Manufacturing Company Ltd, Marubeni Corporation, Mitsubishi Corporation, Taiho Pharmaceutical Company, and Zenyaku Kogyo Pharmaceutical Company."

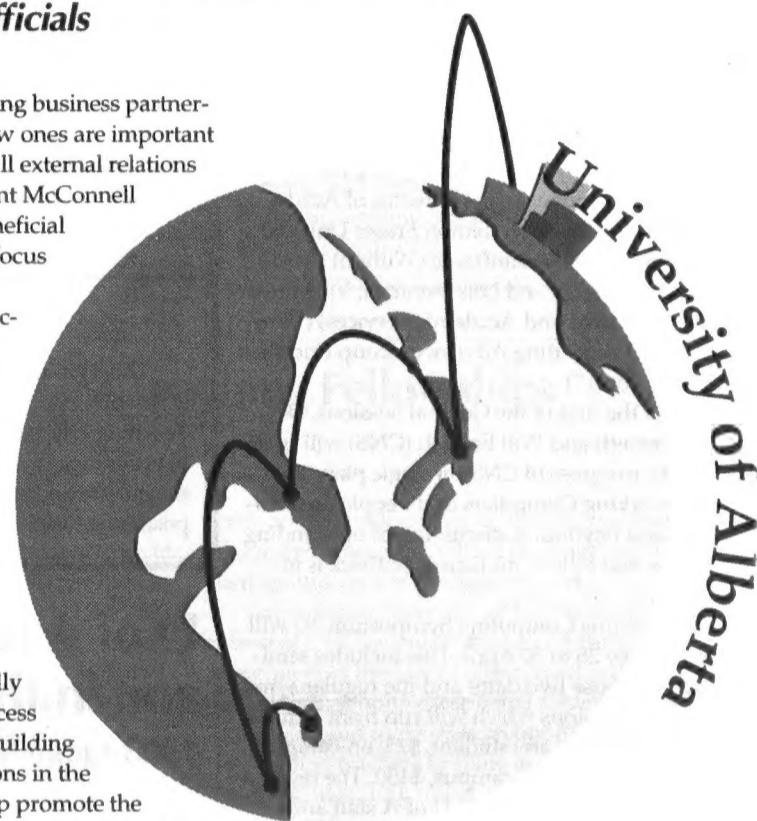
Brian Evans, coordinator of international affairs for the Office of Vice-President (Academic), says, "This is really part of a longer term process of making contacts and building links with other institutions in the Pacific Rim. This will help promote the University's interests here and abroad." The experience of other universities indicates that the success of a single visit can't be gauged, adds the President. "What we're talking about is a longterm investment by both sides."

Faculty of Pharmacy and Pharmaceutical Science Dean Richard Moskalyk said contacts the President can make to solidify existing agreements will be beneficial. The Faculty has a number of reciprocal agreements with Japanese universities, which involve faculty and student exchanges and collaborative research programs between Japanese and U of A scientists. The Faculty also has a business partnership with the Taiho Pharmaceutical Co in Japan, for example.

The University's relationships with the four countries are numerous. In Hong Kong alone, there are 801 alumni. In Japan, Korea and Taiwan, there are 115 alumni, 71 of whom are in Japan. Foreign students on campus this year number 1,453, and 365 of those are from Hong Kong, by far the largest single group of foreign students. Most of those are undergraduates.

There are considerably fewer from the other countries. For example, there are 21 students on campus this year from South Korea, five from Taiwan and nine from Japan.

The University has particularly strong relationships with a number of institutions in South Korea and Japan. Many of those faculty-to-faculty agreements involve the exchange of professors and students. For example, the U of A's Faculty of Medicine has an agreement with Sapporo Medical College for the annual exchange of three students from the U of A and two from Sapporo for periods of 15 to 90 days. The Faculty of Law has an agreement with



Niigata University to develop joint academic and educational programs to promote greater understanding of Canadian and Japanese legal systems, and to exchange students and scholars.

Other agreements are tied closely to the province's sister relationships. For example, the U of A has an agreement with Kwandong University, in Korea, for the exchange of stu-

"We have a tremendous role to play in cultural exchanges."

President Paul Davenport

dents and faculty and conducting collaborative research.

The President points out that the University can do more in the area of student and faculty exchanges. "We think it's in the interest of most of our students to consider spending some of their time during their undergraduate studies at another campus.

"We have a tremendous role to play in cultural exchanges," the President points out. "Part of this trip will be to strengthen our ties in the fine arts and humanities. That's a very important part of academic exchanges. The history of the last 30 years demonstrates that one of the best ways to promote understanding among peoples is through cultural and academic exchanges."

"It's critical that the U of A take a leading role in Asia," said Dean of Law Tim Christian, who will join the President on the Japan portion of the trip.

Stollery wins Canadian Business Leader Award

Robert Stollery, chairman of PCL Constructors Inc, joined an elite group of businessmen last week when he became the twelfth person to be awarded the Canadian Business Leader Award.

The Award is granted annually to an outstanding Canadian business leader by the University of Alberta's Faculty of Business.

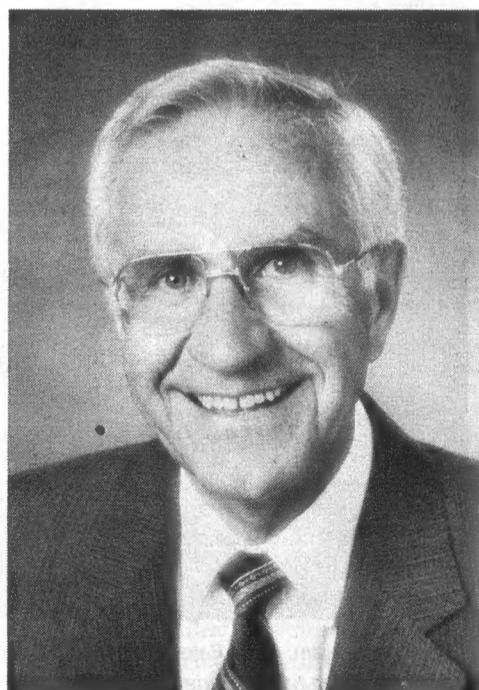
Earlier recipients of the Canadian Business Award have included Wardair founder, Max Ward, Robert Poole of Poole Construction Limited and Francis Winspear for his distinguished contributions as a businessman and educator.

Stollery told the 750 people attending the celebratory dinner last week that his company's success is based on the commitment of its employees. Only employees can buy shares in the company and they must sell them back when they leave.

The company has 21 branches in North America, and has annual sales of \$1.4 billion. PCL is one of the largest construction companies in Canada and one of the half dozen largest in the United States, building the equivalent of a \$5 million building every day.

Stollery, a stalwart supporter of the University, said, "Our international company believes that the quality of education you have received at the University of Alberta stacks up very well indeed against other North American graduates."

Stollery earned his civil engineering degree from this University in 1949 and went to work for PCL as a field engineer. He became a



Bob Stollery, chairman of PCL Constructors Inc

project manager in 1952 and was appointed district manager for Edmonton six years later. In 1964, he became vice-president; in 1969, president. Stollery became the company's chairman and CEO in 1977.

Three years ago he passed the CEO and vice-chairman responsibilities on to Joe Thompson. Today at 68, Robert Stollery remains firmly in control as chairman of PCL Constructors Inc.

Symposium will focus on client/server computing

The University's shift from mainframe computing to the distributed client/server model has begun. It's a transformation that's "bringing power to the desktop in fundamentally new and exciting ways," say the organizers of Campus Computing Symposium '93.

The purpose of the symposium is to convey just what client/server computing can do for the user. There will be General Sessions appropriate for everyone, and Technical (Intro) and Technical (Advanced) Sessions for "would-be hackers and gurus." In addition, various computer vendors will showcase their latest hardware/software configurations.

Keynote speakers are: Monica Beltrametti, Director of Computing and Network Services ("A Shared Architecture for Distributed Computing"); Peter Deutsche, President, Bunyip Information Systems ("Navigating the Internet"); Lionel Tolan, Director of Academic Computing Services, Simon Fraser University ("Dropping the Mainframe (Without Crushing the User)"); and Lois Stanford, Vice-President (Student and Academic Services) ("University Computing Advisory Group Priorities and Futures").

At the first of the General Sessions, Dr Beltrametti and Will English (CNS) will speak on the progress of CNS' strategic plan titled Networking Computers and People on Campus and Beyond. A discussion of outstanding issues will follow; audience feedback is invited.

Campus Computing Symposium '93 will take place 26 to 30 April. This includes seminars on those two dates and the regular symposium sessions which will run from 27 to 29 April. The fees are: student, \$25; on-campus/education, \$50; off-campus, \$150. The registration deadline is 12 April. U of A staff and students can pick up brochures and registration forms at the CNS Help Desk, 302 General Services Building.

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OFFICE OF PUBLIC AFFAIRS,
423 ATHABASCA HALL
UNIVERSITY OF ALBERTA, EDMONTON,
ALBERTA T6G 2E8
TEL: (403) 492-2325 FAX - 492-2997
PROFS - ZZOPA

All enquiries and correspondence should be directed to:
RON THOMAS: EDITOR
MICHAEL ROBB: ASSISTANT EDITOR

Public Affairs produces *Folio* on a regular basis for the staff and other interested persons.

DEADLINES:

Notice of coming events: 9 am three weeks in advance of event. **Classified advertisements:** 3 pm one week before desired publication date. This date also serves as the deadline for cancellation of advertisements. Advertisements cost 40 cents per word with no discount for subsequent insertions. There is a limit of 30 words and a minimum charge of \$2.00. Advertisements cannot be accepted over the telephone. All advertisements must be paid for in full at the time of their submission.

Display advertisements: 3 pm Friday, seven days before desired publication date. Camera-ready artwork is required to size, complete with halftones if necessary. Contact Public Affairs for sizes, rates and other particulars.

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PhD program in Rehabilitation Science approved by General Faculties Council

Expected to make an already strong Faculty even stronger

General Faculties Council gave its stamp of approval last Monday to a proposal to create a PhD program in Rehabilitation Science in the Faculty of Rehabilitation Medicine.

The new program is designed to prepare researchers in rehabilitation science, the systematic study of psycho-social, communication, neurological and musculoskeletal disorders in human beings.

The Faculty wants to play a key role in the country in educating a group of rehabilitation scientists who will increase the body of knowledge of the discipline. These scientists will also develop and evaluate the efficacy of treatments. It's expected they'll work in government, academic, clinical and research settings.

"The Faculty intends to utilize the interdisciplinary expertise available on campus for students who would be admitted to the PhD Program," Acting Dean Jim Vargo explained. "For example, many of the students in this

program could take some or all of their options from other units.

"These might include, but are not limited to, anatomy, physiology, neuroanatomy, neurophysiology, psychology, educational psychology, health services administration, sociology, linguistics, computing science, engineering, and physical education and sport studies," he explained in supporting material.

The Vice-President (Academic) has agreed to provide funding for the program. A conditional allocation of new funding to the Faculty of \$100,000 in 1993-94 has been approved. In 1994-95, that will be increased to a total of \$200,000. The increases are conditional on the program being approved by the University and only if the Faculty continues to agree that the program can and should proceed with less than full funding.

The program would be one of two in Canada; McGill began its program in 1989.

TOWARDS BETTER TEACHING

The Alberta Heritage Scholarship Fund is accepting applications for Excellence in Teaching - Research Projects. The purpose is to encourage projects designed to enhance the quality and effectiveness of teaching at postsecondary institutions in Alberta. Indi-

vidual projects have a maximum value of \$40,000 per project. The deadline for submission is 30 April 1993. Applications are available from: Dr Paula A Brook, University Teaching Services Coordinator, 492-7949.

U of A team very much at home on the range – and in the examination hall

1993 range team from Agriculture takes top prize on the continent

Members of the University of Alberta 1993 range team are equally at home on the range and in the examination hall. The team placed first overall in the recent undergraduate range management examination, held in conjunction with the annual meeting of the Society for Range Management in Albuquerque, New Mexico.

The team of Cody Bateman, Sonya Claussen, Barry Creighton, Pola Genoway, Karen Milne, Jane Thornton and Christoph Weder also placed third overall in the plant identification program. Bateman, a fourth-year agriculture student, was first overall, with the top combined score.

The competition usually attracts about 22 universities and 180 students. The U of A is the only Canadian university represented and three or four are from Mexico. Coach Barry Irving, a technologist in the Plant Science Department, says the students are successful because of the continuity in teaching and the hard work they put into the course.

In preparation for the examinations, the students take Plant Science 407, Plants of North American Rangelands and Wildlands, an in-depth study of the plants and communities of North American rangelands and wildlands ecosystems, and their management. It's a tough course, points out Department Chair Keith Briggs. The course is taught by Arthur Bailey (Plant Science).

"Barry puts a lot into this personally," says Dr Briggs, and the students put a lot of hours into studying. The focus of the course is the annual competition, but the students are also learning to identify rangeland plants—and that stands them in good stead for their entire careers.



The winning team: Cody Bateman, left, and Barry Creighton (seated). Standing, left to right, are Jane Thornton, Karen Milne, Christoph Weder, coach Barry Irving, Sonya Claussen and Pola Genoway.

The students in the Faculty's Wildlife and Rangeland Resources Management program will pursue careers in land management and environmental consulting; some will pursue graduate degrees and others will return to ranches and farms, Irving says.

It takes money to support the team and this is where the Students' Union, Agriculture Club, private ranchers, range professionals and an endowment fund come in. People in the field who support the team know that

CURRENTS



Vertebrate Zoology Museum tour

Joseph Nelson will host a tour of the Vertebrate Zoology Museum 4 April at 2 pm. Public welcome. Sponsor: Friends of the U of A Museums. West door, Biological Sciences Building, University of Alberta.

Faculty research carrels, 1993-94

Applications are now available for faculty research carrels for the 1993-94 academic year. Application forms and guidelines regarding Cameron Library can be obtained from Margo Young, 1-26 Cameron, telephone 492-7918. For Rutherford Library, contact Bev Cormack, 2-102 Rutherford North, 492-1411.

Spring Class to American sign language

Noncredit, Tuesday and Thursday evenings, 6:30 to 9:30. Fee: \$85. Call the Office of Services for Students with Disabilities (492-3381) to register.

Extension courses

The Extension Faculty's Applied Behavioral Sciences calendar for personal development (interpersonal communications, stress management, public speaking, memory training, and more) is now available. Call 492-5069 to receive a copy.

Photo Services

New GSA President stresses cooperative approach in working with Board of Governors

The University and the Graduate Students' Association aren't always going to agree on the issues, but that doesn't mean the two organizations can't work together cooperatively, says the newly elected President.

Frank Coughlan, a first-year MBA student, says the relationship between the University and GSA was substantially strengthened under the leadership of outgoing GSA President Steve Karp. Coughlan says he wants to maintain that solid standing the GSA now has with senior administrators.

There's no doubt in Coughlan's mind that the number one issue facing graduate students is making ends meet. "We have relatively low tuition fees compared to other universities in Canada, but we can't afford to see those go higher. If I hadn't had a good job last summer, I might not have been able to come here."

Coughlan, who earned his BA in economics from this University in 1987, says the GSA will be lobbying on the issue of student loan reform. And during the coming election campaigns the GSA will be asking candidates to state where they stand on postsecondary issues. As for the GSA, it will not be playing partisan politics. "We don't represent the Lib-

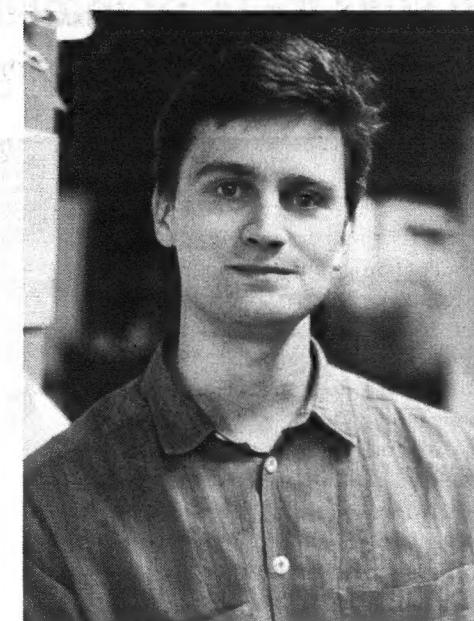
erals, Progressive Conservatives or New Democrats; we represent graduate students."

Coughlan says if the University could afford to get rid of the differential fee paid by foreign students, he would be in favour of doing that. But the University can't afford to do it, and there are a lot of people in the province who agree that the fee should remain.

"I wouldn't like to see it go up," he says, adding that it will be important for the University to find other ways of helping foreign students. Foreign students contribute to the diversity of the campus and it's good for the community to have that interaction, he says.

During his term, Coughlan wants to hold a policy conference for graduate students, to give them an opportunity to state their views. He wants to get more people involved with GSA initiatives, and look at ways of increasing the communication between graduate students and the GSA. He also wants to develop GSA election guidelines. His own election, in fact, has been challenged by his two competitors, who have said the election was not conducted properly.

Other members of the new GSA executive are: Arian Abbasi, Vice-President, Internal;



Frank Coughlan, an MBA student who wants to play a positive role in University governance.

Robert Homersham, Vice-President, Academic; Annabelle Sydie, Vice-President, Student Services; Tom Schwartz, Vice-President, Financial Services; and Steve Ozar, Vice-President, Communications.

RESEARCH ON IMPAIRED DRIVING: CALL FOR PROPOSALS

The Department of Sociology invites submission of proposals to carry out research studies in the area of any aspect of impaired driving. Interest on an endowment made by REID (Research and Education on Impaired Driving—an affiliate of People Against Impaired Driving) will be used to fund one or more successful research proposals up to a total of \$10,000. The award will be refereed by a panel of five (three from the University of Alberta and two from the contributing organization). The competition is open to any member of the University community who is conducting research relating to impaired driving. Proposals should be forwarded to: Dr RA Silverman, Chair, Department of Sociology, University of Alberta, 5-21 Henry Marshall Tory Building. Closing date for the competition is 30 April 1993.

Graduate students' involvement in faculty research programs varies

Arts forum explores how students collaborate in faculty research projects

How do researchers in the Faculty of Arts involve their graduate students in their research programs? The answer to that question, it turns out, depends a great deal on the nature of the work being conducted and the discipline in which the work is being conducted.

At a forum 22 March titled "Graduate Student Training and Involvement in Faculty Research Programs", sponsored by the Faculty's research committee, students and staff in the fine arts, humanities and social sciences shared their experiences on the issue.

PhD sociology student Shirley Solberg, who is involved with Sociology Professor Susan McDaniel's aging workforce project funded by the Social Sciences and Humanities Research Council, said reading about doing research is certainly not the same as doing research.

The project has allowed Solberg, who got involved in the project in its early stages, to do research in an area she is interested in and to fulfill personal and career goals. She's been able to develop her specialty area and gain more depth in the area than she would have gained if she had covered the topic just with her dissertation. The project model has also allowed for a closer mentoring relationship.

"One of the current issues some graduate students face is the uncertainty of funding," Solberg said. "Sometimes funding occurs on a semester-to-semester basis for these students, and that uncertainty can detract from their experiences."

Master of Visual Arts student Marna Bunnell said her experience has been much more individual. Rarely do MVA students and thesis advisors work jointly on a single piece, she explained. Collaboration occurs through parallel interests and activities. Collaboration in our discipline most likely occurs in the context of a graduate research assistantship, added Walter Jule (Art and Design).

While working as a research assistant on the production of a journal, Comparative Literature student Ping-Ping Lee said she learned to type, found the occasional article intellectually stimulating, and acquired a knowledge of how a journal is put together. However, computer problems left her exasperated and wanting to quit, and she found many of the tasks tedious and trivial. Her relationship with her supervisor, however, has been emotionally satisfying and intellectually rewarding.

Generally, in the Psychology Department collaboration between graduate students and faculty occurs in the context of an apprenticeship model, explained Jeff Bisanz (Psychology). In a modified apprenticeship model, students may have a supervisor, but also work with other faculty members to broaden their methodological expertise and knowledge. A third option, working groups, is growing, he said. In this model, mass collaboration occurs among several faculty members and several students:

"There are a lot of advantages to that approach. A student gets a broadening of skills and broadening of personal contacts."

Gary Kelly (English) said, "It seems to me that the disciplines of critical thought in the humanities have a fair gap between what I would call the donkey work and the productive critical thinking. Real opportunities to collaborate on critical thought with research assistants are few." There may be systemic reasons for this problem, he added.

"Collaboration in the production of new critical thought with graduate students occurs mainly through teaching and supervision."

Dr Kelly suggested that the alternative models of research being proposed to people working in the humanities by granting agencies are used in the social sciences, implicated in postmodernism, based on job-training models, and may conceal anti-humanist agendas. These models are taking up increasing chunks of humanities funding from SSHRC, he said.

Nominations for 3M Teaching Fellowships being accepted

The University of Alberta has received nine awards during the seven-year existence of the national 3M Teaching Fellowships Program. In conjunction with the start of the 1993 competition, Bente Roed, Education Director, University Teaching Services, says, "We have many other outstanding instructors who warrant identification and nominations."

The Fellowships are awarded by the Society for Teaching and Learning in Higher Education and 3M Canada Inc. Any individual currently teaching at a Canadian university (regardless of discipline or level of appointment) is eligible. The selection committee will look for independent evidence of: a) excellence in teaching over a number of years, principally (but not exclusively) at the undergraduate

level; and, b) commitment to the improvement of university teaching within the candidate's own institution and perhaps beyond.

An exclusive three-day (7 to 9 November) retreat at the Chateau Montebello is the main component of the award. The retreat is designed to "celebrate exceptional achievements in teaching and to provide an opportunity for outstanding teachers to share experiences." All expenses, including travel, will be paid as part of the award.

Nomination forms are available from University Teaching Services, 215 Central Academic Building, telephone 492-2826. Dossiers are to reach The Society for Teaching and Learning in Higher Education, McMaster University, by 5 May.



The Functional Electrical Stimulation Clinic, named after the Spinal Cord Injury Treatment Centre Society (SCITCS), was officially opened 29 March. Director of the Rick Hansen Centre, Bob Steadward, left, along with President Paul Davenport and Edmonton Oiler Craig Simpson, right, participated in the opening. Senator Louise Miller, seated, presented the Centre with a \$10,000 cheque from SCITCS, bringing the Society's total contribution to \$110,000. The bicycles needed for people with spinal cord injuries cost \$30,000 each US. Simpson, honorary chairman of SCITCS, described the opening as "the beginning of everyone's vision."

Cleaning up contaminated soils focus of interdisciplinary project

Chemical engineers and microbiologists seek to break down contaminants with bacteria

Contaminated soils are typically incinerated, but the soil is rendered lifeless. The organic materials are destroyed and only the mineral materials remain. Sometime, contaminated soils are simply shipped to landfill sites—if it's allowed by regulators.

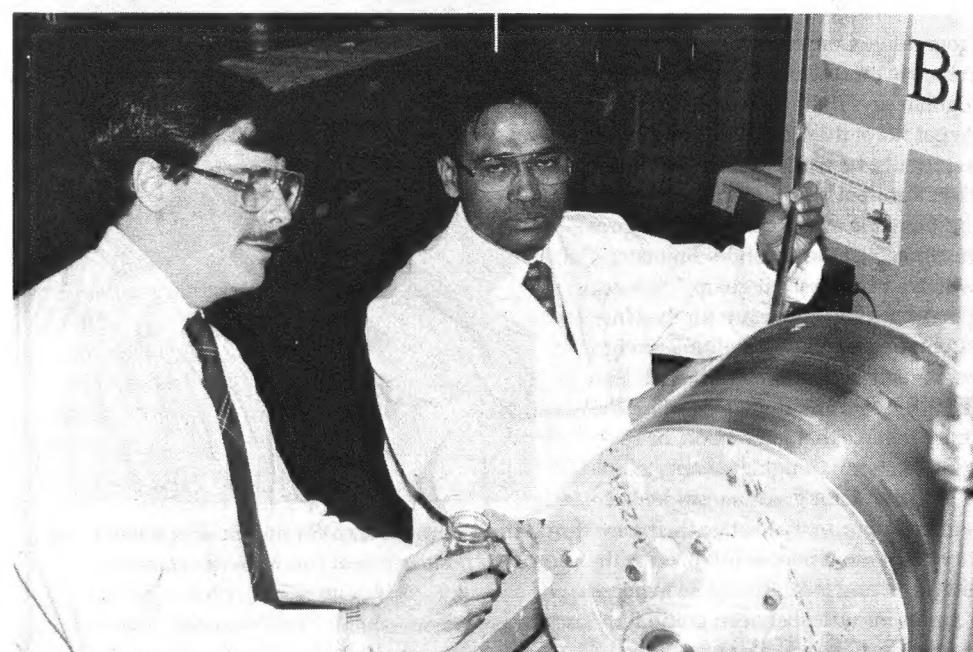
Occasionally, the soils are spread over a field in a method called soil farming, where the contaminants are attacked and broken down by microorganisms. The soil is turned over with a rototiller every so often. "It's a fairly crude method for waste that isn't very toxic," says Chemical Engineering Professor Murray Gray. "It's fairly slow, uncontrolled, and it doesn't do anything during the winter."

But if those same soils are treated with bacteria in a controlled environment, the operation can be done throughout the year. "What we're interested in doing is developing a bioreactor that uses microorganisms to break down the contaminants in the soil," Dr Gray explains.

An interdisciplinary team of two engineers (Dr Gray and Jacob Masliyah) and two microbiologists (Phil Fedorak and Mike Pickard) is particularly interested in soils that have been contaminated with organic wastes. So is the Natural Sciences and Engineering Research Council and a consortium of major Sarnia-area companies, the Institute for Chemical Science and Technology. They're sponsoring the research project with \$70,000 per year over three years.

The basic experiment goes like this: soil contaminated with a compound called anthracene (a crystalline hydrocarbon present in coal tar) is mixed in the rotating, small drum-like bioreactor with water (used sparingly), oxygen and nutrients. A natural soil bacteria selected from an oil-spill site in the province is also mixed in with the soil.

The researchers start out with 600 parts of anthracene per million to simulate an oil spill. "In about three or four days the anthracene is gone. It is converted into carbon dioxide and



Murray Gray, left, and Research Associate Dwijen Banerjee examine results from the bioreactor used to clean contaminated soils.

more bacteria, and there's less than one part per million of anthracene left in the bioreactor," says Dr Gray, who adds that the process should work for any oil-contaminated soil. "We hope to be able to apply this process to soils that have been contaminated with creosote and wood preservatives.

"Hydrocarbons are very insoluble in water and this is one of the major problems. The bacteria are all in the water and the hydrocarbons aren't. That's a limitation on the process. The bacteria are either eating away at the little bits that dissolve in the water, or they attack the hydrocarbons directly. All our data suggest that the bacteria will degrade the hydrocarbons as they dissolve." That's why mixing is so important.

The project, which began in July 1991 and is now at the half-way point, has some

spinoffs. A microbiology graduate student is examining how the bacteria is degrading the hydrocarbon compound. An engineering graduate student is interested in understanding how rapidly the organic materials dissolve in the mixed environment. "That will be useful in designing larger-scale rotating drums."

One of the most intriguing aspects of the project has been its interdisciplinary dimension. Dr Gray says, "We are able to tackle a problem that neither group could tackle on its own. The only way we could tackle this problem was by bringing together microbiologists and engineers."

The next step in the project is to test contaminated soils from actual spill sites and verify that the process works.

BILLETING BULLETIN

The VII World Conference on Animal Production (WCAP) will be held in Edmonton, 28 June to 2 July 1993. The Department of Animal Science is the local host.

The organizing committee identified the attendance of young researchers from developing countries as a high priority, and CIDA was instrumental in the establishment of a travel scholarship fund. However, the demand for travel scholarships has greatly exceeded the funds available. In order to assist as many people as possible to attend, it is hoped that the delegates can be billeted with members of the University community, thereby freeing up money for airfare.

The 50 delegates selected to receive travel scholarship support come from more than 30 countries. Hosts are asked to provide billeting for up to one week. They are not expected to provide transportation or meals.

Anyone who may be able to assist the Department of Animal Science by providing billeting for a WCAP travel scholarship holder is asked to get in touch with Judy Cars at 492-2343.

Onward with Oracle

Computing and Network Services last week purchased for the University the Oracle database management system and application development tools.

The system will be used to manipulate all institutional data, for example, student and financial records, and physical assets.

Training of CNS staff starts shortly; existing databases will be loaded into Oracle on a weekly basis. Over time, Oracle will supplant the mainframe-based IMS tools that the University purchased about 20 years ago.

According to CNS Director Monica Beltrametti, Oracle will allow users to get easier access to institutional data. The goal, Dr Beltrametti says, is to improve University operations, provide better service to users (students, faculty and administrators) and present users with an integrated electronic environment which they can access from their desktop. Integrated applications will provide such information as a graduate student's academic performance coupled with the financial aid that the student has received, and one-step information shopping.

"The future vision is to provide an environment with services such as information kiosks, student debit cards, audiovisual tours of campus, student housing and a preview of lecturers and teaching facilities," Dr Beltrametti says.



The announcement of CNS' purchase of Oracle7 brought together, from the left, standing, Wally Affolder (CNS), David Langston (Oracle Corporation), Brian Silzer, Registrar, Louis Jamernik, Comptroller, Monica Beltrametti (CNS), John Antonio (Oracle Corporation), Peter Watts, Associate Vice-President (Finance), Chief Librarian Ernie Ingles and Will English (CNS). Seated, left to right, are Vice-Presidents Lois Stanford (Student and Academic Services), Glenn Harris (Finance and Administration) and John McConnell (Development and Community Affairs).

David Langston, Edmonton Branch Manager of Oracle Corporation Canada Inc, said the University selected the firm's technology to run

Popularity of U of A MasterCard increases

On the Canadian universities' MasterCard Hit Parade, the University of Alberta is number 3 with a bullet.

With 6,937 card holders (4,339 alumni and staff, 2,598 students), and revenue in excess of \$55,000, the U of A trails Queen's and McGill. However, points out Elke Christianson, Manager, Programs and Services, Office of Alumni Affairs, Queen's has been using the MasterCard program longer than the five years that the U of A has been using it, and both Queen's and McGill have devoted more staff time and funds to the marketing of the card.

"However, it's our [Alumni Association's] most successful revenue-generating program," Christianson says, "but we really want to increase student participation." One way of doing that is through a large-scale promotion which takes place during Registration Week.

In its efforts to be number 1, Alumni Affairs recently received some advice from marketing students Jeff Malowany and Doug Wade. As a class project, they assessed the Mastercard program and recommended that at the start of term, Alumni Affairs ask Bookstore staff to slip a student application form into each bag containing material purchased. They also recommended that an advertisement for the U of A MasterCard be placed in The Student Handbook.

The U of A MasterCard is used the same way as a regular MasterCard but has neither annual nor transaction fees. Every time a University affinity card holder uses the card, the Bank of Montreal contributes a percentage of every purchase to the Alumni Association. "It's the best way that alumni can help the Alumni Association," Christianson says. "All revenue goes into our outreach programs, for example, Branch Programs and employment seminars for unemployed graduates."

The support from all faculty, staff, alumni and students is much appreciated, Christianson says.

across the campus. In Oracle7, the University gets a very portable system that runs across a wide range of hardware platforms, he said.

'Blue Trumpeter' the result of Frank Moher's timely collaboration with Drama Department



In addition to writing "Blue Trumpeter" for the Studio Theatre stage, Frank Moher is the 1993 Mary Mooney Distinguished Visiting Artist.

Edward Albee once remarked that every playwright is working on three plays: one is on paper and nearly ready to be staged, another is partially on paper and the third is taking shape in his head.

Frank Moher, who's written "about 15 plays," had the genesis of "Blue Trumpeter" in mind when he was a student here in the mid-1970s, and he became seriously interested in the play's core subject—schizophrenia—about two years ago. After being commissioned by the Drama Department to write a play specifically for graduating students, he was able to do "Blue Trumpeter" on a fast track. (The play opened last night and continues until 10 April in Myer Horowitz Theatre. Evening performances are at 8; there will be a matinee performance 8 April at 12:30.)

"I was approached just before Christmas of '91 and came here 13 months ago to talk about doing it," says Moher, a former Edmontonian

Auspicious start for *Science Contours*

Faculty of Science administrators have that comfortable feeling that comes from publishing the first issue of a newsletter and then getting favourable feedback on it.

Science Contours was recently mailed to alumni and friends of the Faculty around the world. "Alumni in general have not received information from us since they've graduated," says Dear Dick Peter. "Our intent is to let them know what we're doing and to build bridges."

The first issue includes profiles on outstanding teachers (AT Lau, AC Liu, Ted McClung), researchers (David Schindler, Ray Lemieux), the visit of Stephen Hawking, and a where-are-they-now column (David Salopek, BSc, 1985, and the first graduate student in the Canadian Institute of Theoretical Astrophysics.)

The eight-page newsletter will be published twice a year; the press run is 15,000 copies.

Dean Peter and Assistant Dean Don Williams think *Science Contours* may have

Advocacy ads inconsistent with *Folio* policy

Folio (staff) met with the Non-Academic Staff Association (NASA) representatives last week to outline its policy on advocacy advertising.

NASA's advertising agency submitted an advocacy advertisement to *Folio* on 19 March to run in the 26 March edition. The agency, Continental PIR, called *Folio* again on March 23 to book several more pages for NASA's multi-unit ad campaign.

now living on Gabriola Island, B.C. Impetus for the commissioning came from (second-year) students who, in their third and final year of the BFA acting program, wanted to perform in a play that has a contemporary setting and one or more contemporary issues. Then, too, the Drama Department wanted to give students the experience of working on a new play all the way through the development process and into production.

"They [students] need to be trained to do new plays just the same as doing Molière. There are very few schools giving them that training," Moher says.

In complimenting the students on their initiative, he says that increasingly in Canadian theatre, people will have to be self-starters in order to work. The "whole Fringe concept" was created by self-starters, he points out.

Moher fulfilled the commission with a play that he calls "a very interesting human story... a highly theatrical play about a community of people." (No sooner does he utter the word "theatrical" then he makes it clear that the students involved in staging and lighting are put to the test as much as the eight actors, each of whom he believes has been given "a good, solid role.")

"The roles are challenging but they're achievable by each actor cast in them," says Director Jan Selman. "Frank's turned out to be the perfect choice of playwright. He rose to the occasion."

Selman, formerly artistic director of Catalyst Theatre, says audiences will see a "highly theatrical and poetic play" that explores the questions how do we act in the presence of people with schizophrenia and how can we help. The central character is an architect who's designing a halfway house and who becomes involved in the lives of two people with schizophrenia and their family. He's known little but success, but is moved to wonder what he is beyond a builder of great edifices.

something to do with a donation from the Joseph Beggs Foundation in Redlands, California. Shortly after the newsletter was mailed, the Foundation sent a cheque for \$1,500 to be used to establish a scholarship in physics.

(A similar amount was also sent to the Faculty of Engineering for the establishment of a scholarship in mechanical engineering.)

We don't have direct proof that the two things are related but judging from the timing, they could be, Williams says.

The Faculty subsequently established the Joseph S Beggs Scholarship for an undergraduate student in physics. (Dr Beggs was awarded a BSc in Physics and an MSc in Spectroscopy from the University of Alberta in the early '30s. He taught in the School of Engineering and Applied Science at the University of California at Los Angeles from 1948 to 1971 and was Professor Emeritus until his death in 1991.)

With its liberal slices of mime, dance and poetic monologue, "Blue Trumpeter" presents Selman with "one of the biggest challenges I've had directing. It's not a bread and butter play. What it is is a director's dream."

"The play asks serious questions but it's not heavy. It's funny and very hopeful. It has a deep belief in the capacity of human beings to give, to grow and to make a difference. It's very uncynical in a cynical age."

Throughout the development of "Blue Trumpeter," Moher, along with Selman and the actors, interacted with the Schizophrenia Society of Alberta and its self-help group, Unsung Heroes, an experience Moher found "quite marvelous, quite harrowing and quite moving." Cathy Grant, Acting General Manager of Studio Theatre, says that the interaction "helped everyone involved develop a greater understanding of what it means to have schizophrenia."

Moher aims for social resonance. "At some point in the writing, I must ask, 'Is this going to mean anything to people other than me and a dozen theatre people?' If the answer isn't yes, I stop writing. The writing has to embrace as many people as possible."

"No one's written the perfect play, but I'm pretty happy with it," he says of a play that went through five drafts and was rehearsed for the past month.

He contends that "Blue Trumpeter" is "pretty crucial" at this time because the Drama Department has lost the position of (full-time) Professor of Playwrighting. "A very strong tradition and legacy at this University is at severe risk at this time. 'Blue Trumpeter' helps in the interim, but in the long term it's important that a playwright be a part of Drama's courses."

Cuts the word at province's budget round table

Some "very dramatic" recommendations were put forward at Alberta's first ever budget round table, says Paul Boothe (Economics).

Across the board cuts of between 10 and 20 percent over two or three years was a strong suggestion of virtually all of the 10 groups which addressed themselves to the province's economic predicament.

"A 12 percent cut across the board means you'd have to raise revenues by \$1.5 billion," Dr Boothe says. This would have to be done either through user fees or taxation. "It may be some really dramatic measures are coming."

Dr Boothe and a colleague, Bev Dahlby, were invited to the round table because of their

research and publications dealing with Alberta government finance. They helped provide technical expertise at the two-day (29 and 30 March) event at Red Deer College.

The round table attracted more than 100 people representing business, labour, agriculture, school boards, hospitals, social services, postsecondary education and the community at large. Provincial Audit Committee members Norman Wagner and Ralph Young co-chaired the round table which was open to the public.

Dr Boothe told *Folio* that if the level of interest is sufficient, he will report to the University community on the round table's proceedings.

GFC endorses employment equity plan

Opening Doors: A Plan for Employment Equity at the University of Alberta was endorsed by General Faculties Council last Monday.

The plan was prepared by the President's Employment Equity Implementation Committee, struck in mid-1991 for the purpose of designing, implementing and maintaining an employment equity plan for the University.

Vice-President (Student and Academic Services) Lois Stanford intends to provide GFC with an annual report on the implementation of the work plan contained in *Opening Doors*.

There will be more details on GFC's discussion of the employment equity plan in the next issue of *Folio*.

REPLENISHMENT OF GFC STANDING COMMITTEES, 1993-94

The terms of office of a number of staff members serving on GFC standing committees, and on bodies with membership elected by GFC, will expire on 30 June 1993. The GFC Nominating Committee soon will be seeking replacements for these members and wishes to inform the University community that vacancies will occur on the following committees/bodies:

- Academic Appeals Committee (Regular and Alternate Members)
- Academic Development Committee
- Committee for the Improvement of Teaching and Learning
- Committee on Admissions, Academic Standing, and Transfer
- Campus Law Review Committee
- Collections Committee
- Council on Student Life
- Department Chair Selection Committees - Panel of GFC-Elected Members
- Environmental Research and Studies Centre

The GFC Nominating Committee invites nominations for these positions. All nominations, or expressions of interest, should be accompanied by a brief biographical sketch and be directed to: The Coordinator, GFC Nominating Committee, 2-5 University Hall (492-1938).



■ Bruce Bain (Educational Psychology) has been named a Fellow of the Hong Kong Psychological Society. Dr Bain is active in cross-cultural psychology and intercultural education, specifically in the field of ethnic and race relations, language and cognition, additional language learning and literacy, cross-cultural communication and teacher education. He has spent many years fostering contact between Canadians and peoples in Hong Kong, China, and other countries on the Pacific Rim.

■ Jean Clandinin has been awarded the Raymond B Cattell Early Career Award for Programmatic Research. The award recognizes the scholar who has conducted a distinguished program of cumulative educational research in any field of educational inquiry within the first decade following receipt of the doctoral degree. Dr Clandinin, Associate Professor of Elementary Education, is the first Canadian to have ever won the award. It will be presented at the American Educational Research Association Annual Meeting in Atlanta, 14 April.

■ Zoology student Kathleen Durante has won the Best Student Paper Award for the Ecology Section of the 1992 American Society of Zoologist meetings. The paper by fellow student Glenys Gibson ranked second among the top four student speakers at the meetings held in Los Angeles. The students' supervisor is Fu-Shiang Chia.



From the left, Lou Hyndman, Jasmine El-Nahhas, Kory McDonald and President Paul Davenport.

■ Jasmine El-Nahhas and Kory McDonald recently accepted the 1992-93 Lou Hyndman Edmonton Glenora Award. El-Nahhas is a third-year student pursuing a Political Science Honors degree. She plans to do postgraduate studies in international environmental or human rights law and is interested in a career in law or government. McDonald is majoring in Political Science in her third year of the Honors Arts program. Prominent in her future plans are the combined program for the Bachelor of Laws and Master's of Public Management degrees and a career in either academia, the public sector or politics.

■ It's been a golden season for Bears defenceman and captain Serge Lajoie. After capturing Most Valuable Player honours in the Canada West Conference, Lajoie was named the top player in Canadian university hockey.

■ Jean Lauber, Professor Emeritus of Zoology, is the recipient of the second annual Academic Women's Association Award. Professor Lauber, who resides in Victoria, was one of the founders of the AWA and served as its first president.

■ At the invitation of the Chief Statistician of Canada, Susan McDaniel (Sociology) presented the 1993 International Women's Week lecture at Statistics Canada, Ottawa, in mid-March. Dr McDaniel has been appointed by the United Nations to serve on the Board of Directors of the International Year of the Family Canada Committee.

TALKS

ADULT EDUCATION/EXTENSION

6 April, noon

Margaret Haughey, "Alternative Research Paradigms in Adult Education." Sponsor: Research Committee of the Faculty of Extension, 2-34 University Extension Centre.

ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH

2 April, noon

Shirley Ellis, senior scientific officer, Institute for Animal Health, Compton Laboratory, Berkshire, UK, "HLA-G and Human Reproduction." Cosponsor: Immunology and the Perinatal Research Centre.

5 April, 4 pm

Shirleen Roeder, Department of Biology, Yale University, "Yeast Genes Required for Meiosis: Chromosome Synapsis Recombination and Regulation by RNA Splicing." Presented by Genetics, G-217 Biological Sciences Centre.

ANTHROPOLOGY

2 April, 3 pm

Andrzej Weber, "Subsistence Patterns of Prehistoric Hunters and Gatherers in the Lake Baikal Region, Siberia: Progress Report." 14-6 Tory Building.

BIOETHICS

15 April, 12:30 pm

Larry Ohlhauser, registrar, College of Physicians and Surgeons of Alberta, Jill Swan-Lussier, and Lee Anholt, "Wounded Healers..." 2F1.04 Mackenzie Health Sciences Centre.

BOTANY

8 April, 3:30 pm

Wendy Schneider, "Loblolly Pine Seed Dormancy: The Relationship Between Protein Synthesis in the Embryo and Megagametophyte and the Loss of Seed Dormancy." M-149 Biological Sciences Centre.

CANADIAN INSTITUTE OF UKRAINIAN STUDIES

5 April, 7:30 pm

Lidiia Necheporenko, chair, Department of Pedagogy, Kharkiv State University, "Pedagogy in Search of the Harmonization of Individuality (in Ukrainian)." Heritage Lounge, Athabasca Hall.

CHEMICAL ENGINEERING

8 April, 3:30 pm

RR Santos, "Polypropylene: Matrix of Polyolefin Alloys." 342 Chemical-Mineral Engineering Building.

ECONOMICS

2 April, 3 pm

Lonnie Magee, Department of Economics, McMaster University, "Selection Bias in Regressions Using Survey Data." 8-22 Tory Building.

EDUCATIONAL FOUNDATIONS

22 April, 3:30 pm

Patricia Cooke, "Where are the Women? Gender, Politics and Female Invisibility at the League of Nations." 5-180 Education North.

ENTOMOLOGY

8 April, 4 pm

Darren Pollock, "Family Assignment and Systematics of Pilipalpinae (Coleoptera:

Tenebrionoidea) Based on Larval and Adult Characters." TBW-1 Tory Breezeway.

FOOD SCIENCE

5 April, 4 pm

James Stevens, Gray Beverages, "Carbonated Soft Drinks—Theory and Practice." 1-13 Agriculture-Forestry Centre.

FOREST SCIENCE

7 April, noon

Dave McLaughlin, coordinator, Field Investigations, Phytotoxicology Section, Air Resources Branch, Ontario Ministry of the Environment, "Tree Rings, Nature's Diary: Dendroecological Applications for our Pollution and Climate Change Research." 821 General Services Building.

GEOGRAPHY

2 April, 3 pm

Bruce MacLock, director, Planning Division, Alberta Environment, "Water Management in Alberta: Roles of Professional Geographers (Physical and Human)." 3-36 Tory Building.

13 April, 3 pm

Chris Burn, Department of Geography, Carleton University, "Field Studies of Climate—Permafrost Relations in Northwest Canada." 3-36 Tory Building.

GERMANIC LANGUAGES

2 April, 3 pm

Michael Langhorst, "Natur und die Darstellung des Todes in Goethe's Werken" and Waldemar Riemer, "From Expressionism to National Socialism: Vacuum or Continuity?" 326 Arts Building.

LICENSING EXECUTIVE SOCIETY

8 April, noon

Ray Lemieux, "Tips on Negotiating Licenses." RSVP by 6 April: Joan, 448-7326. Advanced Technology Centre, Suite #134, 9650 20 Avenue.

NURSING

5 April, noon

Susan Smith, "White Nurses, Black Midwives, and Public Health Work." 2-117 Clinical Sciences Building.

PERINATAL RESEARCH CENTRE

6 April, noon

Sylvain Phaneuf, fellow, Nuffield Department of Obstetrics and Gynaecology, John Radcliffe Hospital, Oxford University, "Regulation of Calcium Signalling by Oxytocin and Prostaglandin F₂α in Human Myometrial Cells." 2J4.02 Mackenzie Health Sciences Centre.

13 April, noon

Kathrine Peters, "Perils and Pitfalls in the Use of Neonatal Populations for Research in the Clinical Setting." 2J4.02 Mackenzie Health Sciences Centre.

20 April, noon

Stephen J Lye, associate professor, Department of Obstetrics and Gynaecology, University of Toronto, and head, Division of Perinatal Research, Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, "Molecular Regulation of the Myometrium During Labour." 2J4.02 Mackenzie Health Sciences Centre.

PETER JACYK CENTRE FOR UKRAINIAN HISTORICAL RESEARCH

8 April, 3 pm

Paul Pirie, "New Interpretations of the Life of Stepan Bandera." 352 Athabasca Hall.

14 April, 3 pm

Mikhail Dmitriev, chair, West and South Slav History, Moscow State University, "Two Concepts of Union Before the Synod of Brest (1596)." 352 Athabasca Hall.

PHARMACY AND PHARMACEUTICAL SCIENCES

7 April, 3:30 pm

John T Slattery, Department of Pharmaceutics, School of Pharmacy, University of Washington, Seattle, "Time-Dependent Kinetics Resulting from Enzyme Induction and Inhibition." Sponsor: Alberta Heritage Foundation for Medical Research. 2031 Dentistry-Pharmacy Centre.

PHILOSOPHY

2 April, 3 pm

Thomas Heyd, "Locke's 'Science and Morality' Applied." 4-29 Humanities Centre.

PHYSICS

2 April, 2 pm

Jack Sample, former director of TRIUMF and former chair, Department of Physics, "A New Approach to Explosives Detection." V-121 V-Wing.

PLANT SCIENCE

6 April, 12:30 pm

Zhong Qihong, "RAPD for Identification of Plant Mollicutes." 1-06 Agriculture-Forestry Centre.

7 April, 3 pm

Gregory J Taylor, "Metabolic Exclusion from the Cytosol, a Possible Mechanism of Aluminum Tolerance in Al-Tolerant Cultivars of *Triticum aestivum*." 1-06 Agriculture-Forestry Centre.

8 April, 12:30 pm

Gefu Wang, "Bacillus Species as Biological Control Agents." 1-06 Agriculture-Forestry Centre.

SOIL SCIENCE

8 April, 12:30 pm

Mingchu Zhang, "Polymer-coated Urea: Release Rate and N Uptake by Barley." 2-36 Earth Sciences Building.

13 April, 12:30 pm

Graham J Fishburne, "Key Teaching Behaviours in University Teaching." 2-36 Earth Sciences Building.

22 April, 12:30 pm

Robert Grant, "Modelling O₂ Uptake and Root Growth in Compacted Soils." 2-36 Earth Sciences Building.

ZOOLOGY

2 April, 3:30 pm

Bernard Flury, Department of Mathematics, Indiana University, "Classification, Clustering and Mixture Analysis with Applications to Zoology." M-149 Biological Sciences Centre.

 This symbol denotes environmentally related seminars/events. If you wish to have an environmentally related event listed in this way, please contact: The Environmental Research and Studies Centre, 492-6659.

EVENTS

EXHIBITIONS

BRUCE PEEL SPECIAL COLLECTIONS LIBRARY

Until 28 May

"How Can You Take Your Little Grocer's Shop So Seriously?"—an exhibition of books printed and published by Virginia and Leonard Woolf at the Hogarth Press. Hours: Monday and Friday, 8:30 am to 4:30 pm; Tuesday to Thursday, 8:30 am to 6 pm; Saturday, noon to 5 pm. B7 Rutherford South.

CLOTHING AND TEXTILES COLLECTION

Until 18 June

"Changing Suit: The Evolution of Men's Business Wear 1955-85"—an exhibition of men's wear from the collection. Hours: Monday to Friday, 8:30 am to 5 pm. Basement, Home Economics Building.

FAB GALLERY

Until 18 April

"Multiple/Original"—prints by students in senior and first-year graduate courses in the Printmaking Division. 1-1 Fine Arts Building.

Until 18 April

"Ben KH Wong: Step On Snow"—this exhibition is the final visual presentation in partial fulfillment of the requirements for MVA in Printmaking. Gallery hours: Tuesday to Friday, 10 am to 5 pm; Sunday, 2 pm to 5 pm; closed Saturday, Monday and statutory holidays. 1-1 Fine Arts Building.

McMULLEN GALLERY

Until 28 April

"Human Images"—selections from the collection of the Alberta Foundation for the Arts. Gallery hours: Monday to Friday, 10 am to 4 pm; Saturday and Sunday, 1 to 4 pm (subject to

availability of volunteers). Information: 492-8428 or 492-4211. Mackenzie Health Sciences Centre, 8440 112 Street.

FILMS

GERMANIC LANGUAGES

6 April, 7:15 pm

Der Fluch (1988), German with English subtitles. 141 Arts Building.

20 April, 7:15 pm

Grinstein - Variante (1984), German with English subtitles. 141 Arts Building.

MUSIC

DEPARTMENT OF MUSIC

2 April, 8 pm

Concert Choir Concert. All Saints Anglican Cathedral, 10039 103 Street.

3 April, 8 pm

Master of Music Recital—Corey Hamm, piano. Convocation Hall.

4 April, 3 pm

Concert Band Concert. Convocation Hall.

4 April, 8 pm

University Symphony Orchestra Concert. Convocation Hall.

5 April, 8 pm

Stage Bands I and II Concert. Convocation Hall.

7 April, 5:30 and 8:30 pm

Chamber Music Concerts. Convocation Hall.

8 April, 5 pm

Music 260: Composition Student Recital. Convocation Hall.

14 April, 8 pm

Doctor of Music Recital—Péter Jancewicz, piano. Convocation Hall.

16 April, 8 pm

Master of Music Recital—Jennifer Bustin, violin. Convocation Hall.

THEATRE

STUDIO THEATRE

Until 10 April

"Blue Trumpeter"—a new play by Frank Moher commissioned by Drama. The play tells a story of a developing friendship between an architect and a young man who has schizophrenia. Tickets and information: 492-2495. Myer Horowitz Theatre.

POSITIONS



The University of Alberta is committed to the principle of equity in employment. The University encourages applications from aboriginal persons, disabled persons, members of visible minorities and women.

the Job Information Line at 492-7205 (24 hours). Positions available as of 26 March 1993.

The salary rate for the following position reflects adjustments in accordance with the new classification system and pay plan.

MEDICAL STENO (Grade 6) (Trust), Medicine (Office of the Director of Resident Training), (\$2,070 - \$2,580)

The following positions retain salary rates in accordance with the previous classification system and pay plan.

CLERK-STENO III (Trust/Term for 3 years), Civil Engineering (Geotechnical Group), (\$1,597 - \$2,005)

DEPARTMENTAL/EXECUTIVE SECRETARY (Trust), Pediatrics, (\$2,005 - \$2,580)

PROGRAMMER ANALYST (INDUSTRIAL INTERNSHIP AND LIAISON SPECIALIST) (Term to 31 March 1994/Part-time) Computing Science (\$17.75/hour)



ACCOMMODATIONS AVAILABLE

VICTORIA PROPERTIES - Experienced, knowledgeable realtor with Edmonton references will answer all queries, and send information. No cost or obligation. Call (604) 595-3200, Lois Dutton, Re/Max, Ports West, Victoria, BC.

SHARE - Idlewyde home with two other people. \$270/month plus utilities. Janet/Mike, Western Relocation Services, 434-4629.

RENT - Lansdowne, short term. Furnished four bedroom bungalow, fireplace, double garage. \$800/month plus utilities. Western Relocation, 434-4629.

RENT - Riverbend, Falconer. Exquisite two storey, four bedrooms, many extras. \$1,600/month, immediate. Mike/Janet, Western Relocation Services, 434-4629.

RENT - Pleasantview bungalow, inviting, new, three bedrooms. \$1,000/month. Western Relocation, 434-4629.

RENT - Galleria condo, two bedrooms, immediate possession. Completely renovated, very high style. \$1,400/month. Western Relocation, 434-4629.

RENT - West end, Laurier Heights. Large, bright, furnished home available 9 July, one year. Double garage, delightful backyard. Upgraded, unique design. \$1,500/month. Western Relocation, 434-4629.

MICHENER PARK - Two bedroom rowhouses and apartments for rent in University residence located in southwest Edmonton. Excellent bus service to University, utilities included. All enquiries welcome, 492-7044.

RENT - May-July, fully furnished, three bedroom, English-style cottage. University Avenue. Sunny home, great garden. \$800/month. 438-7886, 492-5731.

RENT - Sabbatical, exceptional two bedroom condo, furnished, parking. University/Strathcona, June/July 1993 - June 1994. \$1,000/month. 492-2800, 439-3424.

RENT - Garneau Mews, May-September, two bedroom luxury condo. Fully furnished, underground parking, \$1,000/month. References, damage deposit, prefer mature persons. 865-5310 or 431-0067.

SUBLET - Fully furnished, one bedroom apartment available for summer. On campus, 11104 84 Avenue. \$540/month, female please.

AWARD OPPORTUNITIES



NRC TRAINING PROGRAM FOR WOMEN IN SCIENCE AND ENGINEERING

Value: \$10,000.

Eligibility: An applicant must:

- be a female Canadian citizen or permanent resident of Canada;
- be enrolled fulltime in an undergraduate science or engineering program at a Canadian university;
- be completing the first year of her program (to be accepted in the training program for her second year);
- be a high academic achiever and maintain this for the duration of the program;
- be willing to work for NRC (or for an NRC partner) in either the Summer Student or Student Co-op program;
- be committed to a professional career in science and engineering.

Training and financial support for the participants will be for the second, third and fourth years of their undergraduate studies as long as the eligibility requirements continue to be met.

Deadline date: 30 April 1993.

For more information and application forms, please contact the Office of Student Awards, 252 Athabasca Hall.

PROFESSIONAL DEVELOPMENT - TRAINING SESSION

Topic: "Thriving Under Fire: Creating Superior Customer Satisfaction." **Date and time:** Tuesday, 27 April, 8:30 am to 4 pm. **Location:** Banquet Room, Lister Hall. **Workshop leader:** Jeff Mowatt, Associate, Customs Learning Systems, Calgary. **Fee:** \$75 (GST included). (Includes materials, luncheon, and refreshments.) Those eligible may also claim from the Central Professional Development Fund - not eligible for Tuition Remission. The workshop is open to all staff.

Registration deadline: 15 April. Telephone 492-4588. **Note:** Who are the "customers" in postsecondary education? While we are employed by the University, we actually serve the students. Whether or not we are used to this terminology, students are our customers. Yet, students are not our only customers. Postsecondary institutions have multiple customers with multiple expectations. Customers include not only students, but also parents, the community, and internal staff.

nonsmoking, underground parking available. Call 439-5942.

RENT - Riverbend, three bedroom beautiful house, 2,119', two years old, ensuite with jacuzzi, double garage, deck, landscaped. \$1,400/month, available 1 July for one year, negotiable. 988-6567, 492-5779.

RENT - Furnished, one bedroom condo. Pool, balcony, parking, utilities, \$750. 492-0409 day, 433-3493 evening.

SALE - Condos, Le Marchand Tower. Two bedrooms, immaculate, \$175,000. Hyde Park, three bedrooms, unique, \$129,900. Tarpon Woods, two storey, three bedrooms, \$154,500. Janice Duke, Royal LePage, 437-7480 for viewing.

SUBLET - Bachelor apartment, 8515 112 Street, Newton Place. Rent negotiable. 439-8198.

RENT - Fully furnished, four bedroom house, Greenfield. Finished basement, double garage, large, private backyard. Quiet area, near schools, short drive/bus to University. July 1993 - June 1994. \$1,000 negotiable. 492-5780, 436-7208.

RENT - Attractive, executive home on Strathearn Drive. Two bedrooms, furnished. Sabbatical, 1993-1994. \$1,400/month. Phone 469-4992.

RENT - Belgravia, five-minute walk University. Three bedroom chalet-style home, fully furnished; sunroom, deck, attached garage. August/September 1993 - May/June 1994. \$1,100/month. 434-9635, 492-2373.

SALE BY OWNER - Two storey, executive, 2,100'. Lansdowne, backs onto University Farm, \$204,000. Phone 436-0574 or 892-2999.

RENT - Immaculate, 3,000', four bedroom executive home. Fully furnished, seven appliances, air conditioned, double garage. Close to University, available 15 May, \$1,600/month. Steve, Ted Powers Realty, 454-3819.

SALE - Old Riverbend ravine property with four bedrooms. Huge lot, almost 1/2 acre. Enormous potential! Val Cload, Spencer Realty, 435-0808.

SALE - Executive high rise condo. 1,335', very spacious and practical layout. Two bedrooms, two baths. Excellent LRT service to University and downtown. \$151,000. Deborah Otterholm, Sutton Group, 450-6300.

SALE - Belgravia, three bedroom bungalow. 1,335', fully developed basement, huge 11,000' lot, \$168,000. Ed Lastiwka, Royal LePage, 446-3800, 437-7480.

SALE - McKernan, lovely, four bedroom, two storey. Bright, modern kitchen, Durabilt windows, siding, oak

floors. Excellent location, \$159,800. Ed Lastiwka, Royal LePage, 446-3800, 437-7480.

SALE - Millcreek Ravine 1 1/2 blocks away. Beautiful, treed property with large south facing garden. Three bedrooms, 1,150', semi-bungalow, \$115,900. 465-5977.

RENT - Glenora bungalow, two bedrooms main, two bedrooms down, large, bright kitchen, furnished. Minutes from University/downtown. July 1993 - 30 June 1994. \$1,000. 447-5585.

SALE - Grandview Heights, custom-built, two storey, offers four bedrooms plus den, main floor family room, hardwood floors. Quality plus. Private showing. Beth Siegel, Royal LePage, 487-9092, 455-4181.

RENT - Immaculate, one bedroom, three-level executive condo. Fully furnished, underground parking, two blocks from University. Unique style, self-contained. May 1993 - 30 April 1994, possibly longer. 439-5346 after 6 pm.

SALE - Two storey, Victorian-styled townhouses near Southgate. Only 16 units in complex, eight backing onto park. Now under construction. From \$123,900. Call for details. Maggie Woytkiw, Re/Max Realty, 438-7000.

ACCOMMODATIONS WANTED

MATURE, UNIVERSITY EMPLOYEE - available to housesit. Previous experience. Phone Joanna, 433-8668 or 492-6365.

CORPORATE CLIENT - requires home, generous space to entertain guests, for two-year lease starting 1 July. Prefer Glenora, Windsor Park, Riverbend, Westbrook, Laurier,

Valleyview, Westridge. Other areas considered. Western Relocation, 434-4629.

TWO MONTH RENTAL - Preferably unfurnished, 15 April - 15 June. West end or University area. Western Relocation, 434-4629.

RESPONSIBLE COUPLE with experience, references, will housesit and do light chores, yard work etc. on acreage preferably. 433-3286.

AUSTRALIAN SEEKS accommodation with person/family, six months. 433-0548.

TIRED OF CONVENTIONAL apartments. Professional female seeks character loft/studio/one bedroom suite. 1 May. Quiet, non-smoking, neighbours essential. Please leave message, 437-2487.

AUTOMOBILES AND OTHERS

1991 FIREFLY - 20,000 km, 5 speed, 2 door. \$6,200. David, 439-4215 before 9 pm.

SERVICES

DONNIC WORD PROCESSING - Since 1978, specializing in theses, manuscripts, etc. 453-2769.

COMPUTERIZED LITERATURE

SEARCHING - Expert information retrieval by experienced scientist. All areas. Requests accepted by phone. No red tape! Competitive rates. Satisfaction guaranteed. JL Citation Services, 487-8652.

DAVID RICHARDS CARPENTRY - Certified journeyman NAIT. Complete interior/exterior residential and commercial renovations including plumbing/electrical. References available. 436-6363.

FLY TO EUROPE - Guaranteed lowest airfares plus save up to \$100. Call Newwest Travel, 432-7446.

MARK EHRMAN CABINET SERVICES - Custom designs or made to match existing. References available. 463-0889.

TECH VERBATIM - Word processing, WP 5.1, Words 5.0, medical terminology, laserprint, campus location. Donna, 440-3714 evenings, weekends.

HEARTWOOD RENOVATIONS - Complete interior renovations. Specializing in basements, bathrooms, kitchens. Count on us for all your home repairs. No job too small. References available. Phone Dennis Ellerman, 466-5941.

BACK BASICS REMEDIAL THERAPY - Supplementary health care coverage. 436-8059.

PRIORITY PET CARE - Petsitting and homesitting. Live-in care available. Call Tracy at 448-2751. Bonded and insured.

WORD EXPRESS - Experienced technical editor. Books, proposals, conference papers, journal submissions, reports, etc. 987-3555.

BRITAIN, Ireland, France, Spain, Italy. Furnished cottages, villas, apartments. Weekly rental. Hearthstone Holidays, Box 68085, #70, Bonnie Doon Mall, Edmonton, T6C 4N6. Phone 465-2874, fax 468-5517.

PRO TYPING - Reports, résumés, theses, spreadsheets, WP5.1. Laser printing. Fax service available. 471-6097.

INCOME TAX RETURNS - Prepared at your place or mine by retired chartered accountant. Nick Romalo, phone 483-2035.

TREE AND SHRUB PRUNING - Yard cleanups, garden services, quality work. Reasonable rates. 468-5981 (message).

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